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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/667,577	09/22/2003	Carl M. Ross	NON PROV-1	9649

7590 06/05/2006
Carl M. Ross
1654 Fifth Ave
Bayshore, NY 11706

EXAMINER

GILLAN, RYAN P

ART UNIT	PAPER NUMBER
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3746

DATE MAILED: 06/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/667,577

Applicant(s)

ROSS, CARL M.

Examiner

Ryan P. Gillan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 January 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 9/22/03 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Izaguirre (5,305,779) in view of Leighton et al. (6,676,382). Izaguirre, Figures 1a-2b, teach a pumping system and an associated method for sensing and moving liquid comprising a liquid sensor (28, 29, 86, and also 74, 78, 80, 82) for sensing liquid and being constructed and arranged to provide an electrical signal when exposed to the liquid. The device also includes a control unit (Figure 2b) comprising a relay (104-1, 106, 106-1, 112), whereby the relay (104-1, 106, 106-1, 112) becomes activated by the electrical signal provided by the sensor (28, 29, 86, and also 74, 78, 80, 82). The system includes a pump for moving liquid that has been sensed by the sensor (28, 29, 86, and also 74, 78, 80, 82) from a first location (in tank 66) to a second location (outside the 66). When the relay (start relay 104-1) becomes activated (by sensor 29, 80), the pump (68) is powered on.

3. The Izaguirre device differs from the claimed invention in that there is no explicit teaching of a power converter for converting an input AC voltage to a DC voltage where the DC voltage is output from the power converter of the electric motor of the pump.

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4. AC lines (108, 110) indicate that the power supply of the system is an AC voltage source. It was well known in the art that AC power sources are more economical to use and transport than DC voltage sources. However, DC motors are inexpensive and versatile for pump actuation. Leighton et al. in Figure 1 teach an analogous sump pump, control, and monitoring system. Figure 33 shows a 120 volt AC power source for the pump, which is transformed (i.e. power converter/inverter) to 40 volts DC for direct consumption of the pump motor (col. 9 line 65 - col. 10 line 8). This power converter device allows the use of readily available and efficient AC power coupled with an inexpensive and versatile DC motor. Furthermore, the Leighton et al. device includes a battery backup power supply in the event AC power is unavailable. Power sources are adjusted with automatic switches (col. 1 line 64 - col. 2 line 9), and col. 10 line 1 - col. 11 line 11). Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the Izaguirre device by, incorporating the AC power converter, as taught by Leighton et al., in order to advantageously allow the use of readily available and efficient AC power coupled with an inexpensive and versatile DC motor. Furthermore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the Izaguirre device by, incorporating the AC power supply with the DC power backup and switch, as taught by Leighton et al. in order to advantageously prevent pumping disruption in the event of AC power loss.

5. A second liquid sensor (82, 106-1, 106-2, see col. 8 lines 12-17) activates a second relay (112) of the control unit (Figure 2b), which supplies DC voltage to a visual

and audible notification means (horn 116, light 114) for indicating the presence of an initial collection of liquid.

6. The system includes a switch (94) for bypassing the sensor so that the pump may, in a manual mode, obtain power duty from the control (Figure 2b) unit without the need to sense liquid in an automatic mode (col. 7 line 65 - col. 8 line 2).

7. With respect to the exact voltage conversion from 120 volts AC to 12 volts DC, where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation. In re Swain et al., 33 CCP (Patents) 12550, 156 F.2d 239, 70 USPQ 412; Minnesota Mining and Mfg. Co. v. COE, 69 App. D.C. 217, 99 F.2d 986, 38 USPQ 213; Allen et al. v. Coe, 77 App. D.C. 324, 135 F.2d 11, 57 USPQ 136.

Response to Arguments

8. Applicant's arguments filed 1/26/06 have been fully considered but they are not persuasive.

9. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., "a separate power converter unit that is non-integral with the pump") are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

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10. Applicants argument that "Examiner has not pointed to a suggestion to combine the features of these references" is not persuasive because it was suggested in the previous Office Action that it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the Izaguirre device by, incorporating the AC power converter, as taught by Leighton et al., in order to advantageously allow the use of readily available and efficient AC power coupled with an inexpensive and versatile DC motor.

Conclusion

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

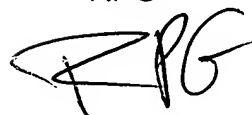
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ryan P. Gillan whose telephone number is 571-272-8381. The examiner can normally be reached on 8:30 am - 5:00 pm; Monday - Friday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Thorpe can be reached on 571-272-4444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

RPG

A handwritten signature in black ink, appearing to be the letters 'RPG' with a stylized flourish.A handwritten signature in black ink, appearing to be 'TAE JUN KIM' in a cursive style.

TAE JUN KIM
PRIMARY EXAMINER